

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

IN RE APPLICATION OF: Shigeru OHNO, et al.

SERIAL NO: NEW APPLICATION

GAU:

FILED: HEREWITH

EXAMINER:

FOR: METHOD FOR PREVENTING MINERALIZATION IN THE PERIODONTAL LIGAMENT (PDL)

**INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97**

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

**REFERENCES**

- The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**RELATED CASES**

- Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

**CERTIFICATION**

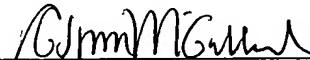
- Each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

**DEPOSIT ACCOUNT**

- Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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SERIAL NO.: New Application

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FOR: METHOD FOR PREVENTING MINERALIZATION IN THE PERIODONTAL  
LIGAMENT (PDL)

**STATEMENT OF RELEVANCY**

**Reference AS on Form PTO-1449:**

This document is disclosed in the body of a specification.

**Reference AT on Form PTO-1449:**

This document is disclosed in the body of a specification.

**Reference AU on Form PTO-1449:**

This document is disclosed in the body of a specification.

**Reference AV on Form PTO-1449:**

This document is disclosed in the body of a specification.

**Reference AW on Form PTO-1449:**

This document is disclosed in the body of a specification.

**Reference AX on Form PTO-1449:**

This document was written by the Inventors.

**Reference AY on Form PTO-1449:**

This document was written by the Inventors.

**Reference AZ on Form PTO-1449:**

This document shows [Results] in the cultured periodontal ligament cells treated with either cycloheximide or a TGF- $\beta$  neutralizing antibody, induction of expression of RGD-CAP by mechanical expansion force was completely suppressed. Furthermore, it was found that the level of the ALPase activity decreases by treating the periodontal ligament cells with RGD-CAP.

**[Discussion and Conclusion]**

The results above suggest that RGD-CAP is secondarily induced to express by mechanical expansion force and strongly concerned with maintaining the function of the periodontal ligament by regulating the ALPase activity.

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 245819US0		SERIAL NO. NEW APPLICATION	
LIST OF REFERENCES CITED BY APPLICANT		APPLICANT		Shigeru OHNO, et al.			
		FILING DATE HEREWITH		GROUP			
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
	AI						
	AJ						
	AK						
	AL						
	AM						
	AN						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION		
					YES	NO	
	AO						
	AP						
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
AS	T. DOI, et al., "Expression and Roles of RGD-CAP ( $\beta$ ig-h3) in Human Periodontal Ligament", JOURNAL OF DENTAL RESEARCH Vol. 80 SPECIAL ISSUE (IADR abstracts), March 2001, pgs. 782-783						
AT	Suzanne C. DIEUDONNÉ, et al., "Differential Display of Human Marrow Stromal Cells Reveals Unique mRNA Expression Patterns in Response to Dexamethasone" JOURNAL OF CELLULAR BIOCHEMISTRY, Vol. 76, 1999, pgs. 231-243						
AU	Jung-Eun KIM, et al., "A TGF- $\beta$ -Inducible Cell Adhesion Molecule, $\beta$ ig-h3, Is Downregulated in Melorheostosis and Involved in Osteogenesis", JOURNAL OF CELLULAR BIOCHEMISTRY, Vol. 77, March 2000, pgs. 169-178						
AV	Shigeru OHNO, et al., "RGD-CAP ( $\beta$ ig-h3) enhances the spreading of chondrocytes and fibroblasts via integrin $\alpha$ 1 $\beta$ 1", BIOCHIMICA ET BIOPHYSICA ACTA, Vol. 1451, 1999, pgs. 196-205						
AW	S. OHNO, et al., "RGD-CAP ( $\beta$ ig-h3) is expressed in precartilage condensation and in prehypertrophic chondrocytes during cartilage development", BIOCHIMICA ET BIOPHYSICA ACTA, Vol. 1572, 2002, pgs. 114-122						
AX	S. OHNO, et al., "RGD-CAP ( $\beta$ ig-h3) Exerts a Negative Regulatory Function on Mineralization in the Human Periodontal Ligament", J. DENT RES. 81 (12), September 2002, pgs. 822-825						
AY	T. DOI, et al., "Mechanical stimuli enhances the expression of RGD-CAP/ $\beta$ ig-h3 in the periodontal ligament, ARCHIVES OF ORAL BIOLOGY, Vol. 48, 2003, pgs. 573-579						
AZ	Abstract of the 61 <sup>st</sup> Annual Meeting of the Japanese Orthodontic Society", pgs. 170-171						
						<input type="checkbox"/> Additional References sheet(s) attached	
Examiner				Date Considered			
*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							